

FIG. 2A

PGC INFORMATION

PGC #1		PGC #2		PGC #3	
NO. OF CELLS=3		NO. OF CELLS=3		NO. OF CELLS=5	
CELL #1	CELL A	CELL #1	CELL D	CELL #1	CELL E
CELL #2	CELL B	CELL #2	CELL E	CELL #2	CELL A
CELL #3	CELL C	CELL #3	CELL F	CELL #3	CELL D
—	—	—	—	CELL #4	CELL B
—	—	—	—	CELL #5	CELL E

FIG. 2B

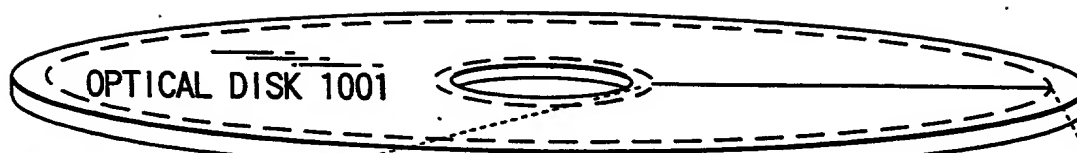


FIG. 3A

← INNER CIRCUMFERENCE SIDE 1006		(OUTER CIRCUMFERENCE) SIDE 1007 →	
LEAD-IN AREA 1002 (EMBOSSSED/ REWITABLE DATA ZONE)	VOLUME & FILE MANAGER INFORMATION 1003 (REWITABLE DATA ZONE)	DATA AREA 1004 (REWITABLE DATA ZONE)	LEAD-OUT AREA 1005 (REWITABLE DATA ZONE)

FIG. 3B

COMPUTER DATA AREA 1008	AUDIO & VIDEO DATA AREA 1009 (1 VOLUME=1 AV FILE)	COMPUTER DATA AREA 1010
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FIG. 3C

ANCHOR POINTER 1015	CONTROL INFORMATION 1011	VIDEO OBJECT 1012	PICTURE OBJECT 1013	AUDIO OBJECT 1014
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FIG. 3D

REWRITE NUMBER 1102	AV DATA CONTROL INFOR- MATION 1101	PLAYBACK CONTROL INFOR- MATION 1021	RECORDING CONTROL INFOR- MATION 1022	EDIT CONTROL INFOR- MATION 1023	THUMBNAIL PICTURE CONTROL INFORMATION 1024
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FIG. 3E

VOB CONTROL INFORMATION 1106	CELL TIME CONTROL INFORMATION 1104	PGC CONTROL INFORMATION 1103
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FIG. 3F

CELL TIME CONTROL GENERAL INFORMATION 1111	CELL TIME SEARCH INFORMATION 1112	CELL TIME INFOR- MATION #1 1113	CELL TIME INFOR- MATION #2 1114	...	CELL TIME INFOR- MATION #m 1115
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FIG. 3G

CELL TIME GENERAL INFORMATION #m 1116	CELL VOBU TABLE #m 1117
--	-------------------------

FIG. 3H

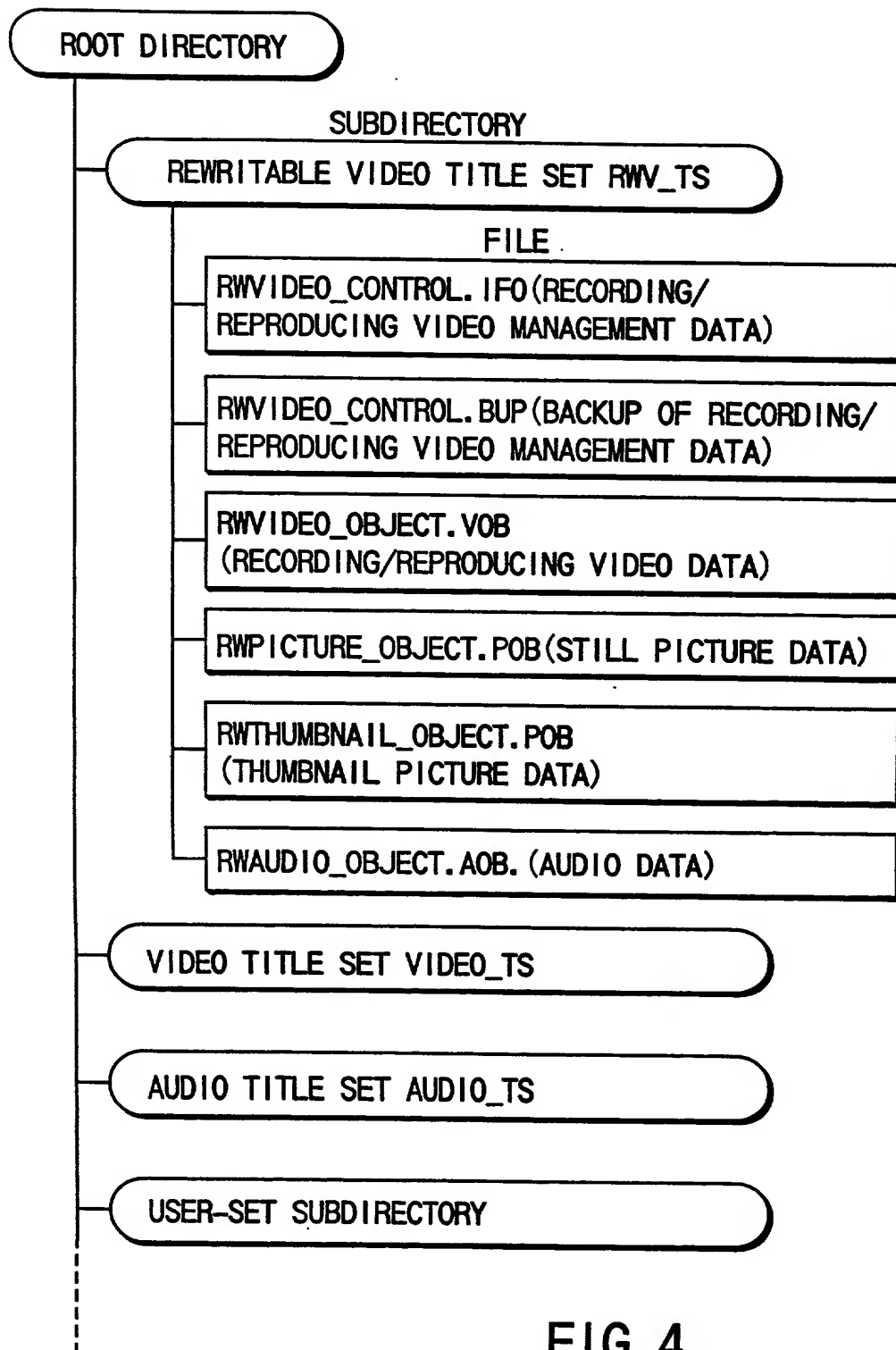


FIG. 4

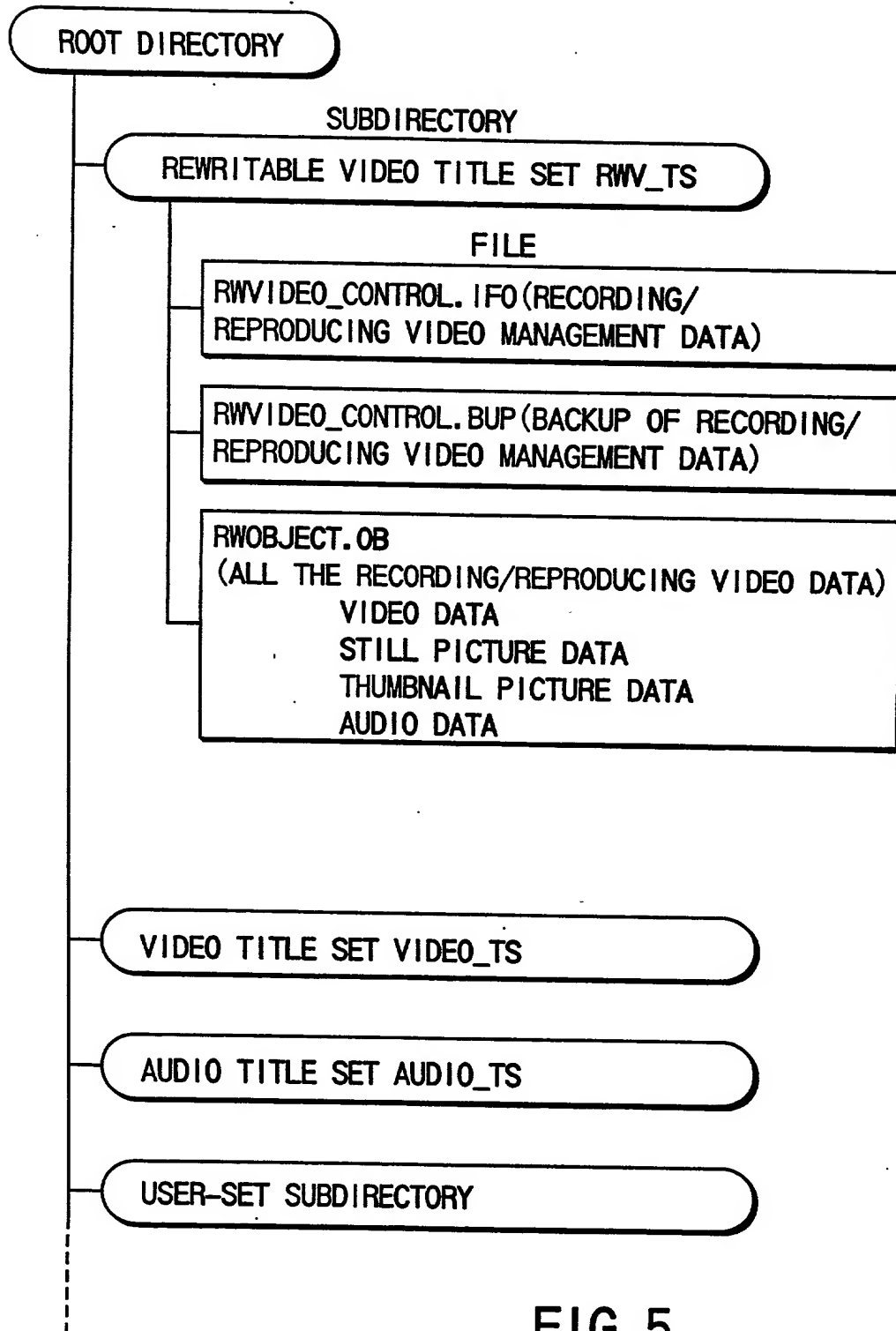


FIG.5

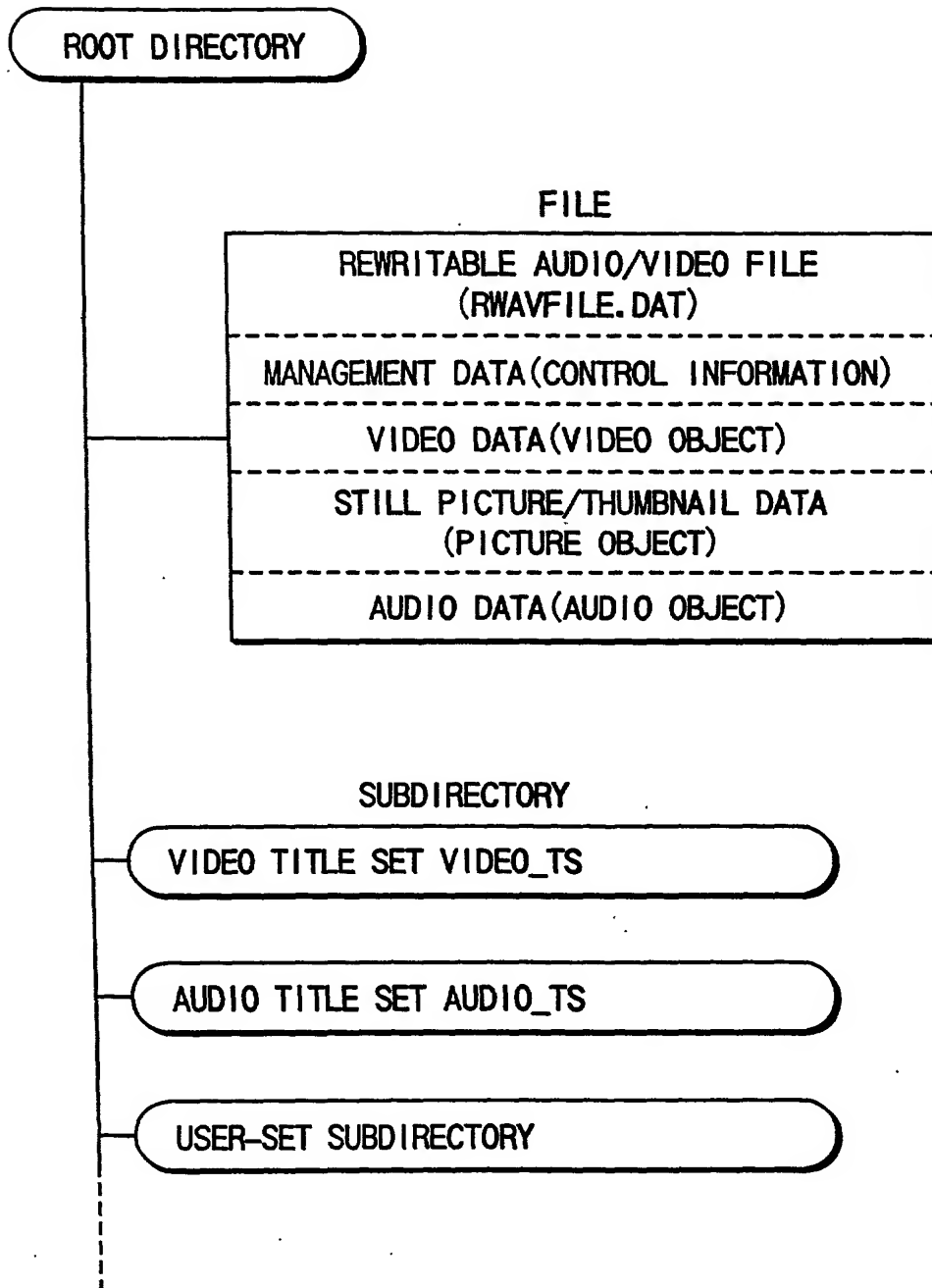


FIG. 6



FIG. 7

206270 6605001

TOTAL NO. OF CELL TIME	2001
AV ADDRESS OF THE HEAD POSITION OF CELL TIME #1	2002
DATA SIZE (NO. OF SECTORS USED) OF CELL TIME #1	2003
AV ADDRESS OF THE HEAD POSITION OF CELL TIME #2	2004
DATA SIZE (NO. OF SECTORS USED) OF CELL TIME #2	2005
.....	
AV ADDRESS OF THE HEAD POSITION OF CELL TIME #m	2006
DATA SIZE (NO. OF SECTORS USED) OF CELL TIME #m	2007
LBN IN WHICH CELL TIME INFORMATION #1 IS RECORDED	2011
LBN IN WHICH CELL TIME INFORMATION #2 IS RECORDED	2012
.....	
LBN IN WHICH CALL TIME INFORMATION #m IS RECORDED	2013

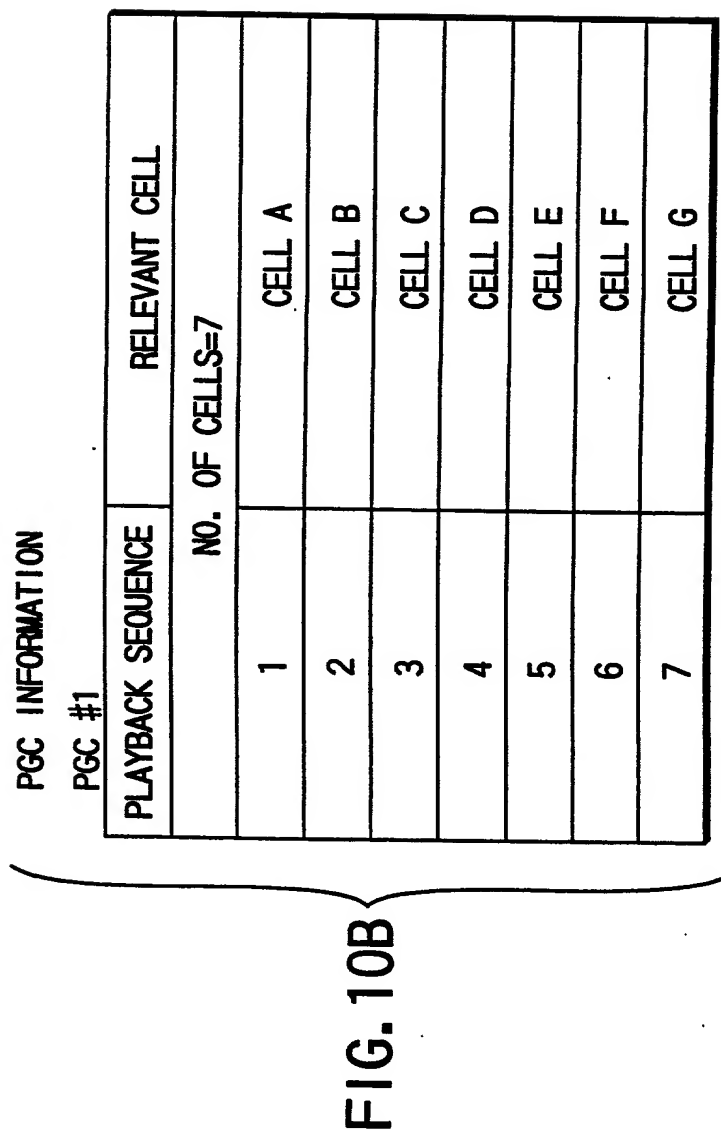
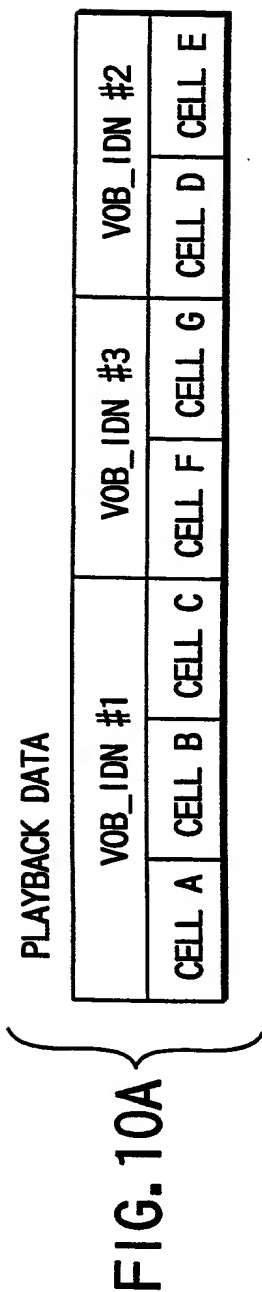
CELL TIME CONTROL GENERAL INFORMATION 1111
CELL TIME SEARCH INFORMATION 1112

FIG. 8

TOTAL NO. OF CELL TIME	2001
AV ADDRESS OF THE HEAD POSITION OF CELL TIME #1	2002
AV ADDRESS OF THE END POSITION OF CELL TIME #1	2023
AV ADDRESS OF THE HEAD POSITION OF CELL TIME #2	2004
AV ADDRESS OF THE END POSITION OF CELL TIME #2	2025
.....	
AV ADDRESS OF THE HEAD POSITION OF CELL TIME #m	2006
AV ADDRESS OF THE END POSITION OF CELL TIME #m	2027
LBN IN WHICH CELL TIME INFORMATION #1 IS RECORDED	2011
LBN IN WHICH CELL TIME INFORMATION #2 IS RECORDED	2012
.....	
LBN IN WHICH CELL TIME INFORMATION #m IS RECORDED	2013

CELL TIME CONTROL GENERAL INFORMATION 1111
CELL TIME SEARCH INFORMATION 1112

FIG. 9



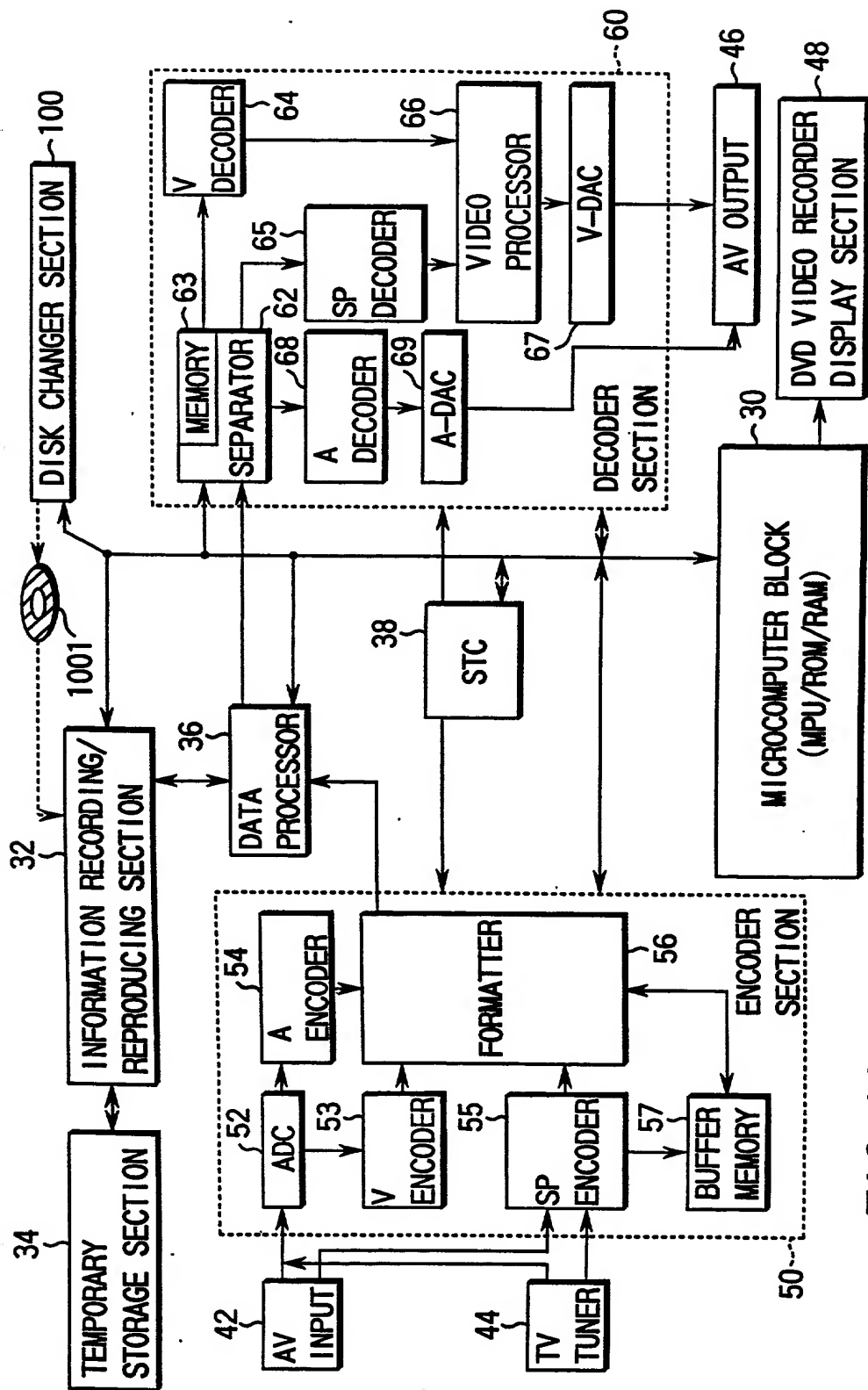


FIG.11

LSN	LBN	STRUCTURE	DESCRIPTOR 442	CONTENTS 443
0-15		STRUCTURE 411	RESERVED 459(00h BYTES ALL)	
16		VOLUME RECOGNITION SEQUENCE 444	BEGINNING EXTENT AREA DESCRIPTOR 445	VRS START POSITION
17			VOLUME STRUCTURE DESCRIPTOR 446	DISC CONTENT DESCRIPTION
18			BOOT DESCRIPTOR 447	BOOT START POSITION
19			TERMINATING EXTENT AREA DESCRIPTOR 448	VRS END POSITION
~31			RESERVED 460(00h BYTES ALL)	
32~			...	
34		MAIN VOLUME DESCRIPTOR SEQUENCE 449	PARTITION DESCRIPTOR 450	RECORDED POSITION OF SPACE TABLE
			PARTITION CONTENT USE 451	RECORDED POSITION OF SPACE BIT MAP
			UNALLOCATED SPACE TABLE 452 AD(50) UNALLOCATED SPACE BIT MAP 453 AD(0)	RECORDED POSITION OF FILE SET DESCRIPTOR
35			LOGICAL VOLUME DESCRIPTOR 454 LOGICAL VOLUME CONTENT USE 455 LAD(100)	

FIG.12A

~47					
~63			...		
-255			...		
256		FIRST ANCHOR POINT 456	RESERVED 461(00h BYTES ALL)		
-271			ANCHOR VOLUME DESCRIPTOR POINTER 458		
272	0	FILE STRUCTURE 486	RESERVED 462(00h BYTES ALL)		
~321	~49		SPACE BIT MAP DESCRIPTOR 470		MAPPING OF RECORDING/UNRECORDING OF SPACE BIT MAP
322	50		USE(AD(*),AD(*),...,AD(*)) 471		EXTENT LIST OF UNRECORDED STATE OF SPACE TABLE
~371	~99		FILE SET DESCRIPTOR 472 ROOT DIRECTORY ICB 473 LAD(102) 474		RECORDED POSITION OF FE OF ROOT DIRECTORY
372	100		...		
373	101		ROOT DIRECTORY AFE(AD(103)) 475		FIDs RECORDED POSITION
374	102				

FIG.12B

375	103	FILE STRUCTURE 486	A FID(LAD(104), LAD(110)) 476	B, D:FE POSITION
376	104		PARENT DIRECTORY BFE(AD(105)) 477	FIDs RECORDED POSITION
377	105		FID(LAD(106)) OF B 478	FE POSITION OF C
378	106		FE(AD(107)AD(108)AD(109)) 479	FILE DATA POSITION
382	110		DIRECTORY D FE(AD(111)) 480	FIDs RECORDED POSITION
383	111		D FID(LAD(112), LAD(NONE) 481	E, F:FE POSITION
384	112		SUBDIRECTORY F FE(AD(113)) 482	FIDs RECORDED POSITION
385	113		FID(LAD()LAD(114)LAD(118)) 483	H, I:FE POSITION
386	114		FE(AD(115)AD(116)AD(117)) 484	FILE DATA POSITION
390	118		I FE(AD(119), AD(120)) 485	FILE DATA POSITION
379-	107-	FILE DATA 487	INFORMATION ON FILE DATA C 488	
387-	115-		INFORMATION ON FILE DATA H 489	
391-	119-		INFORMATION ON FILE DATA I 490	

FIG. 13A

LLSN-271 ~ LLSN-257			RESERVED 463 (00h BYTES ALL)	
LLSN-256 ~ LLSN-255 ~ LLSN-224	SECOND ANCHOR POINT 457		ANCHOR VOLUME DESCRIPTOR POINTER 458	
LLSN-223 ~ LLSN-208	RESERVED VOLUME DESCRIPTOR SEQUENCE 467		RESERVED 464 (00h BYTES ALL)	
LLSN-207 ~LLSN			PARTITION DESCRIPTOR 450 PARTITION CONTENT USE 451 UNALLOCATED SPACE TABLE 452 UNALLOCATED SPACE BIT MAP 453 LOGICAL VOLUME DESCRIPTOR 454 LOGICAL VOLUME CONTENT USE 455	BACKUP OF MAIN VOLUME DESCRIPTOR SEQUENCE
			RESERVED 465 (00h BYTES ALL)	

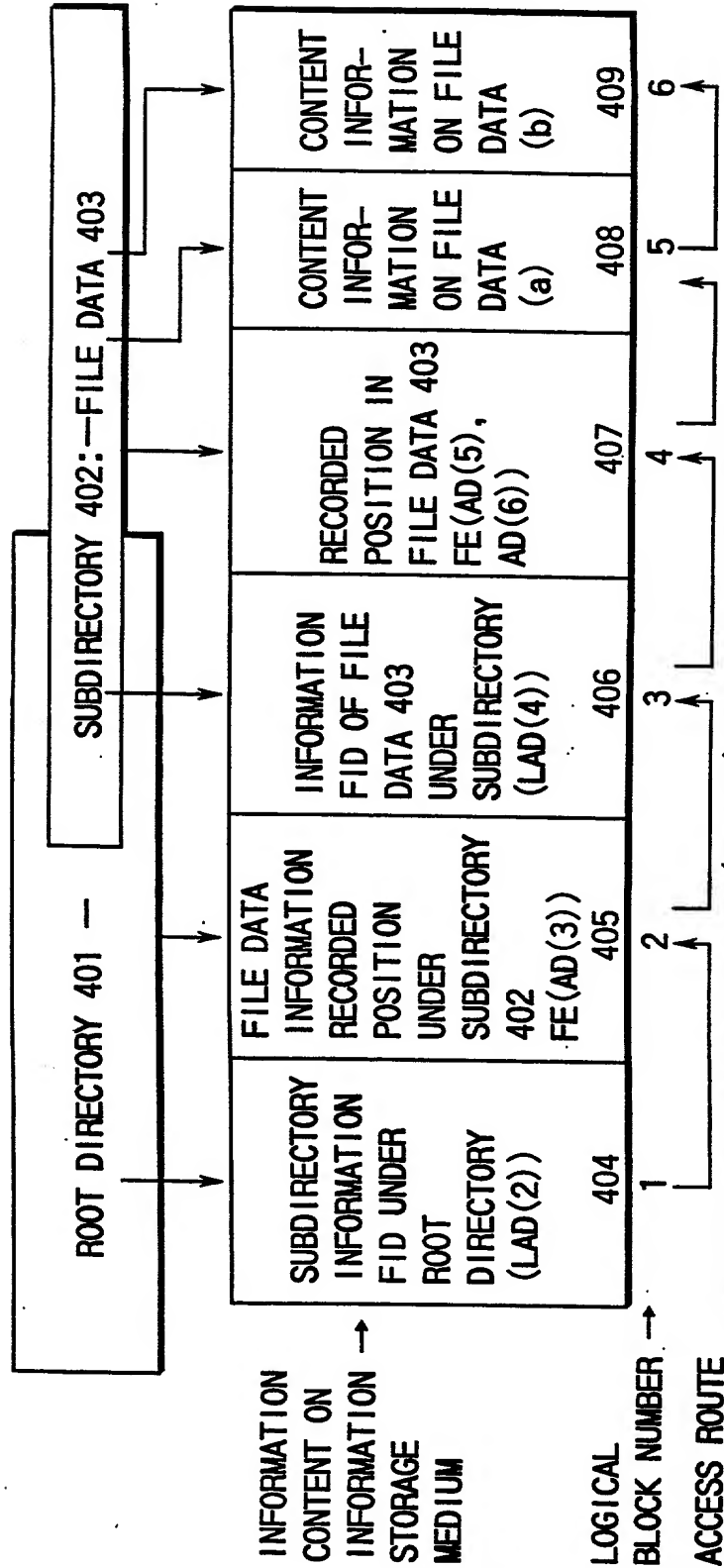
*LSN...LOGICAL SECTOR NUMBER 491

*LBN...LOGICAL BLOCK NUMBER 492

*LLSN...LAST LOGICAL SECTOR NUMBER (LAST LSN) 493

*IT IS QUITE UNUSUAL THAT SPACE BIT MAP AND SPACE TABLE ARE RECORDED TOGETHER. USUALLY, EITHER SPACE BIT MAP OR SPACE TABLE IS RECORDED

FIG. 13B



IN DVD-RAM, LOGICAL BLOCK (SECTOR) SIZE IS 2048 BYTES.
A COLLECTION OF CONSECUTIVE LOGICAL BLOCKS (SECTORS) IS CALLED EXTENT.
AN EXTENT IS MADE UP OF ONE LOGICAL BLOCK (SECTOR) OR A SERIES OF CONSECUTIVE BLOCKS (SECTORS).
TO ACCESS THE FILE DATA RECORDED ON INFORMATION STORAGE MEDIUM, REPEAT ACCESS TO ADDRESS (AD(*), LAD(*)) AS SHOWN IN THE INFORMATION, WHILE READING THE INFORMATION SEQUENTIALLY AS SHOWN THE ACCESS ROUTE

FIG.14

FID(LAD(LOGICAL BLOCK NUMBER))
...INDICATES INFORMATION ON FILE
(INCLUDING ROOT DIRECTORY, SUBDIRECTORY, AND FILE DATA)

DESCRIPTOR TAG (≡257), IDENTIFIER FOR THE CONTENTS OF DESCRIPTION 421 [16 BYTES]	FILE CHARACTERISTICS INDICATING TYPE OF FILE 422 [1 BYTE]	INFORMATION CONTROL BLOCK INDICATING THE RECORDED POSITION OF CORRESPONDING FE 423 (LAD(*))	EITHER FILE IDENTIFIER DIRECTORY NAME OR FILE DATA NAME 424	PADDING DUMMY AREA (000h) 437
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*FILE CHARACTERISTICS (FILE TYPE) INDICATES ONE OF PARENT
DIRECTORY, DIRECTORY, FILE DATA, AND FILE DELETE FLAG

FIG.15

AD (LOGICAL BLOCK NUMBER) . . . METHOD OF WRITING THE POSITION OF EXTENT
ON INFORMATION STORAGE MEDIUM

LENGTH OF EXTENT 410 (NO. OF LOGICAL BLOCKS) [EXPRESSED IN 4 BYTES]	POSITION OF EXTENT 411 (LOGICAL BLOCK NUMBER) [EXPRESSED IN 4 BYTES]
---	--

FIG.17

FE(AD(*),AD(*),.....,AD(*))
...INDICATES THE RECORDED POSITION ON INFORMATION STORAGE MEDIUM OF
A FILE SPECIFIED BY FID IN HIERARCHICAL FILE STRUCTURE

DESCRIPTOR TAG (≡261), IDENTIFIER FOR THE CONTENTS OF DESCRIPTION 417 [16 BYTES]	ICB TAG INDICTING TYPE OF FILE (TYPE=4/5) 418 [20 BYTES]	PERMISSION, INFORMATION TO PERMIT RECORDING, OR PLAYBACK, OR DELETING FOR EACH USER 419 [32 BYTES]	ALLOCATION DESCRIPTOR, DESCRIBING THE RECORDED POSITIONS OF FILES SIDE BY SIDE ON INFORMATION STORAGE MEDIUM (LOGICAL BLOCK NUMBERS ON INFORMATION STORAGE MEDIUM) (AD(*),AD(*),.....,AD(*)) 420
--	---	--	--

*FILE TYPE IN ICB TAG=1 MEANS UNALLOCATED SPACE ENTRY
*FILE TYPE IN ICB TAG=4 MEANS DIRECTORY
*FILE TYPE IN ICB TAG=5 MEANS FILE DATA

FIG.16

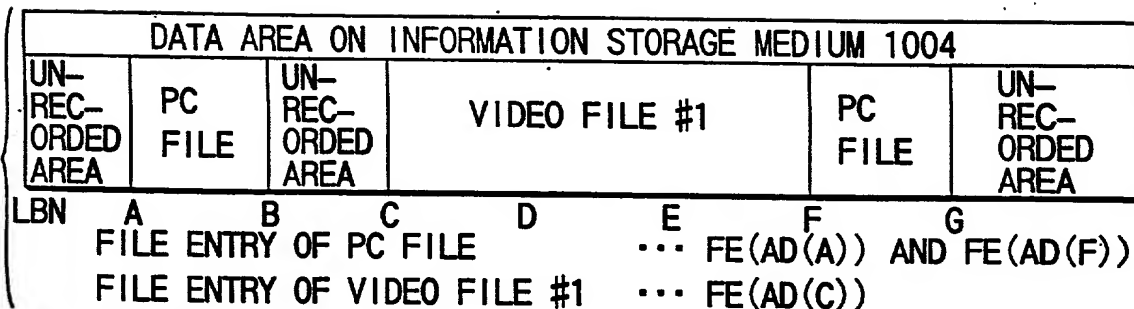


FIG. 18A

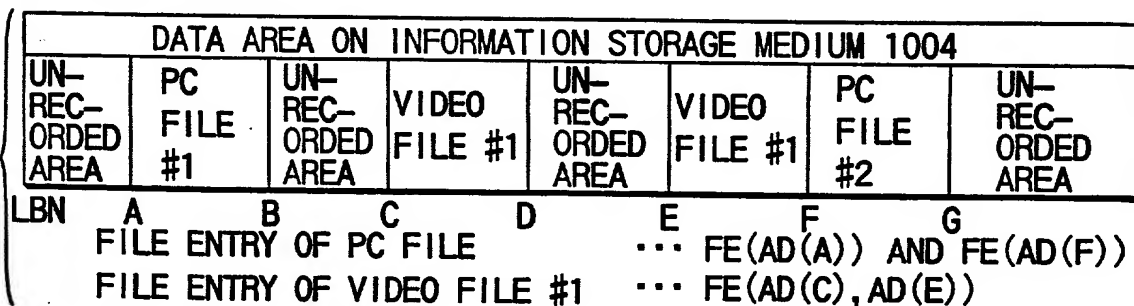


FIG. 18B

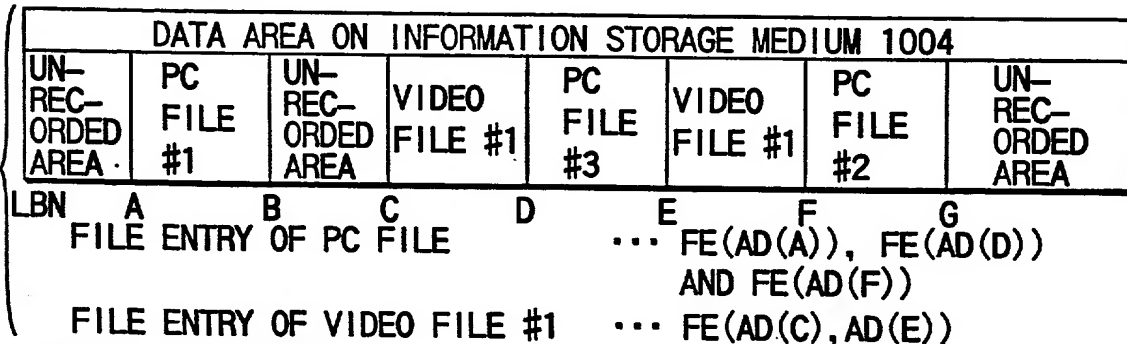


FIG. 18C

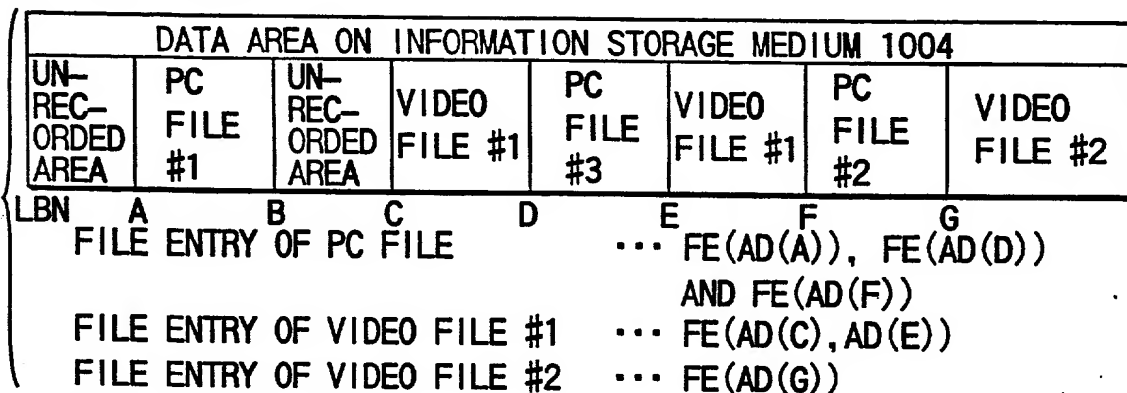


FIG. 18D

"FIG. 18A" 558551

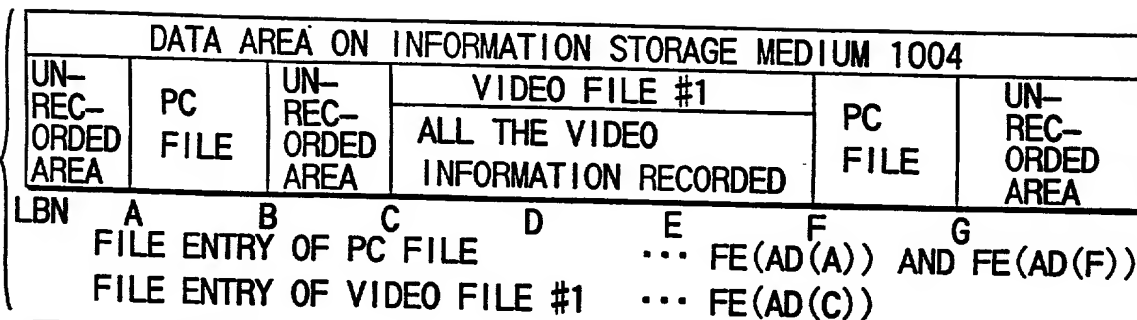


FIG. 19A

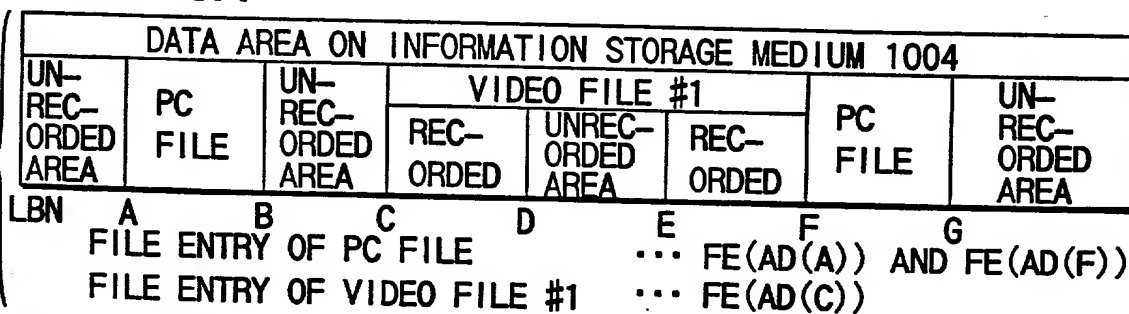


FIG. 19B

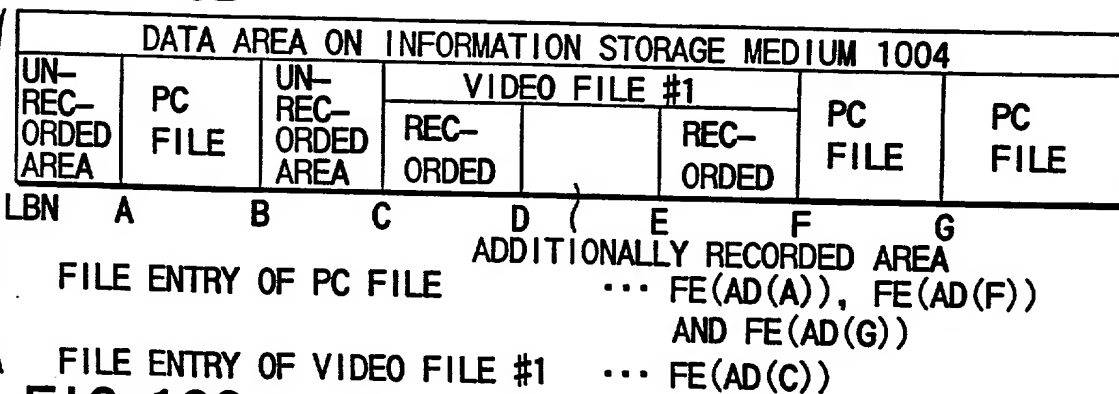


FIG. 19C

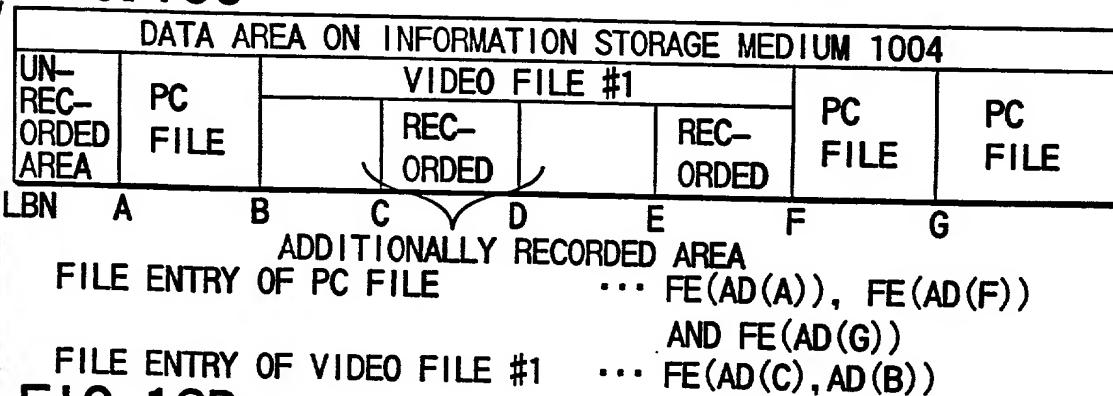


FIG. 19D

CELL TIME GENERAL INFORMATION #m	CELL TIME NUMBER	2031
	DATE AND TIME THE CELL TIME WAS CREATED OR CHANGED LAST	2032
	PLAYBACK SPEED IN REPRODUCING THE CELL TIME	2033
	PASSWORD ASSIGNED TO THE CELL TIME	2034
	CONTENTS OF PERMISSION SET FOR THE CELL TIME	2035
	INFORMATION ON USER-SPECIFIED DELETION	2036
	PRIORITY RANK INFORMATION ON DELETE/ OVERWRITE OF THE CELL TIME	2037
	INFORMATION ON LINK DESTINATION OF THE CELL TIME	2038
	TOTAL NO. OF VOBUS CONTAINED IN THE CELL TIME	2032
	SIZE OF ONE PICTURE IN 1ST VOB (NO. OF SECTORS USED)	2033
CELL VOB TABLE #m	SIZE OF ONE PICTURE IN 2ND VOB (NO. OF SECTORS USED)	2033
	
	SIZE OF ONE PICTURE IN n-TH VOB (NO. OF SECTORS USED)	2033
	DATA SIZE OF 1ST VOB (NO. OF SECTORS USED)	2041
	NO. OF VIDEO FRAMS CONTAINED IN 1ST VOB	2042
	DATA SIZE OF 2ND VOB (NO. OF SECTORS USED)	2043
	NO. OF VIDEO FRAMS CONTAINED IN 2ND VOB	2044
	
	DATA SIZE OF m-TH VOB (NO. OF SECTORS USED)	2045
	NO. OF VIDEO FRAMS CONTAINED IN m-TH VOB	2046

THE CONTENTS OF PLAYBACK SPEED 2033 IN REPRODUCING CELL TIME

000:NORMAL ONEFOLD-SPEED PLAYBACK	001:FF(TWOFOLD-SPEED PLAYBACK)
010:FF(FOURFOLD-SPEED PLAYBACK)	
100:REVERSE-DIRECTION ONEFOLD-SPEED	011:FF(EIGHTFOLD-SPEED PLAYBACK)
111:SETTING PLAYBACK	101:FR(TWOFOLD-SPEED REVERSE ROTATION)
SPEED ON DRIVE SIDE	

THE CONTENTS OF PERMISSION SET FOR THE CELL TIME

00:PERMITS ALL USERS TO REPRODUCE, DELETE, AND CHANGE INFORMATION
01:PERMITS ALL USERS TO REPRODUCE INFORMATION PERMITS ONLY PERSON ENTERING PASSWORD TO DELETE AND CHANGE INFORMATION
10:PERMITS ONLY PERSON ENTERING PASSWORD TO REPRODUCE, DELETE AND CHANGE INFORMATION

FIG. 20

[illegible][illegible]

FIG. 21B

VIDEO FILE=RECORDING/REPRODUCING VIDEO DATA (RMVIDEO_OBJECT.VOB)									
UNRECORDED AREA	VOB#1		UNRECORDED AREA				VOB#2		
	CELL A						CELL B		CELL C
							DELETE RANK 3		
	EXTENT #a						EXTENT #b		
	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU
UNRECORDED AREA									

FIG.21C

VIDEO FILE=RECORDING/REPRODUCING VIDEO DATA (RMVIDEO_OBJECT.VOB)									
VOB#3	VOB#1		VOB#3		VOB#2		VOB#3		
CELL E	CELL A		CELL E		CELL B		CELL F		
					DELETE RANK 3				
EXTENT #c	EXTENT #a		EXTENT #d		EXTENT #b		EXTENT #e		
VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU	VOBU

FIG.21D

2051 2052 2053 2054 2055

NO. OF ALL EXTENTS CONSTITUTING VOB #1	2051
VOB #1 BEGIN AV ADDRESS OF 1ST EXTENT	2052
VOB #1 SIZE (NO. OF SECTORS) OF 1ST EXTENT	2053
VOB #1 BEGIN AV ADDRESS OF 2ND EXTENT	2054
VOB #1 SIZE (NO. OF SECTORS) OF 2ND EXTENT	2055
.....	
VOB #2 NO. OF ALL EXTENTS CONSTITUTING VOB #2	2061
VOB #2 BEGIN AV ADDRESS OF 1ST EXTENT	2062
VOB #2 SIZE (NO. OF SECTORS) OF 1ST EXTENT	2063
.....	
NO. OF ALL CELLS CONSTITUTING VOB #1	2071
VOB #1 BEGIN AV ADDRESS OF 1ST CELL	2072
VOB #1 BEGIN AV ADDRESS OF 2ND CELL	2073
.....	
NO. OF ALL CELLS CONSTITUTING VOB #2	2074
VOB #2 BEGIN AV ADDRESS OF 1ST CELL	2075
VOB #2 BEGIN AV ADDRESS OF 2ND CELL	2076
.....	

POSITIONAL INFORMATION ON VOB
INFORMATION ON RELATION WITH CELLS IN VOB

FIG.22

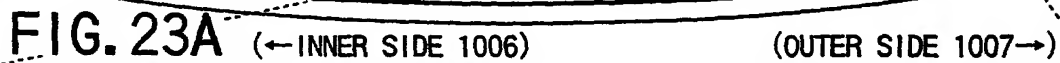
FIG. 23B

FIG. 23C

FIG. 23DFIG. 23EFIG. 23FFIG. 23CFIG. 23H

FIG. 23H

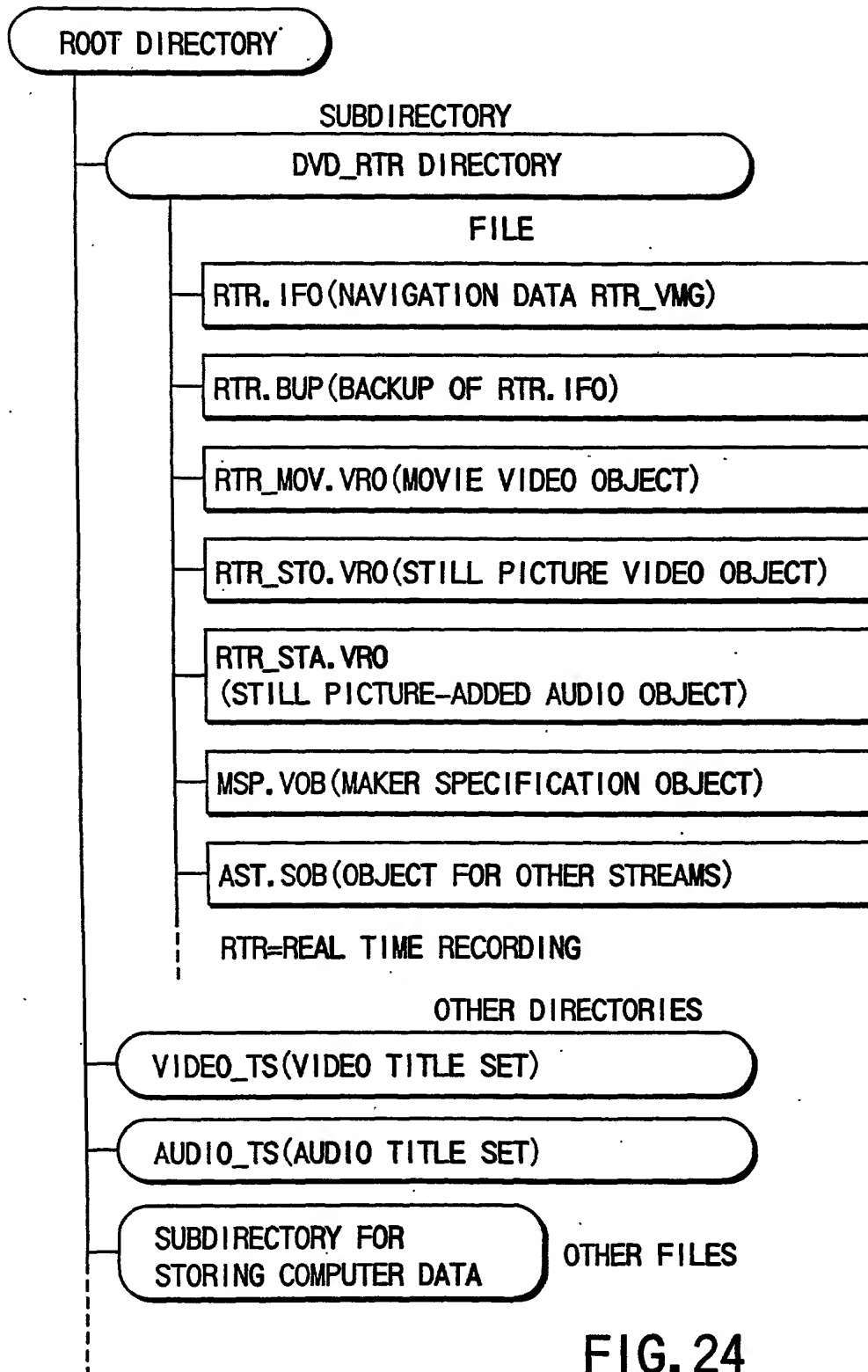


FIG. 24

2025-10-06 09:50:07

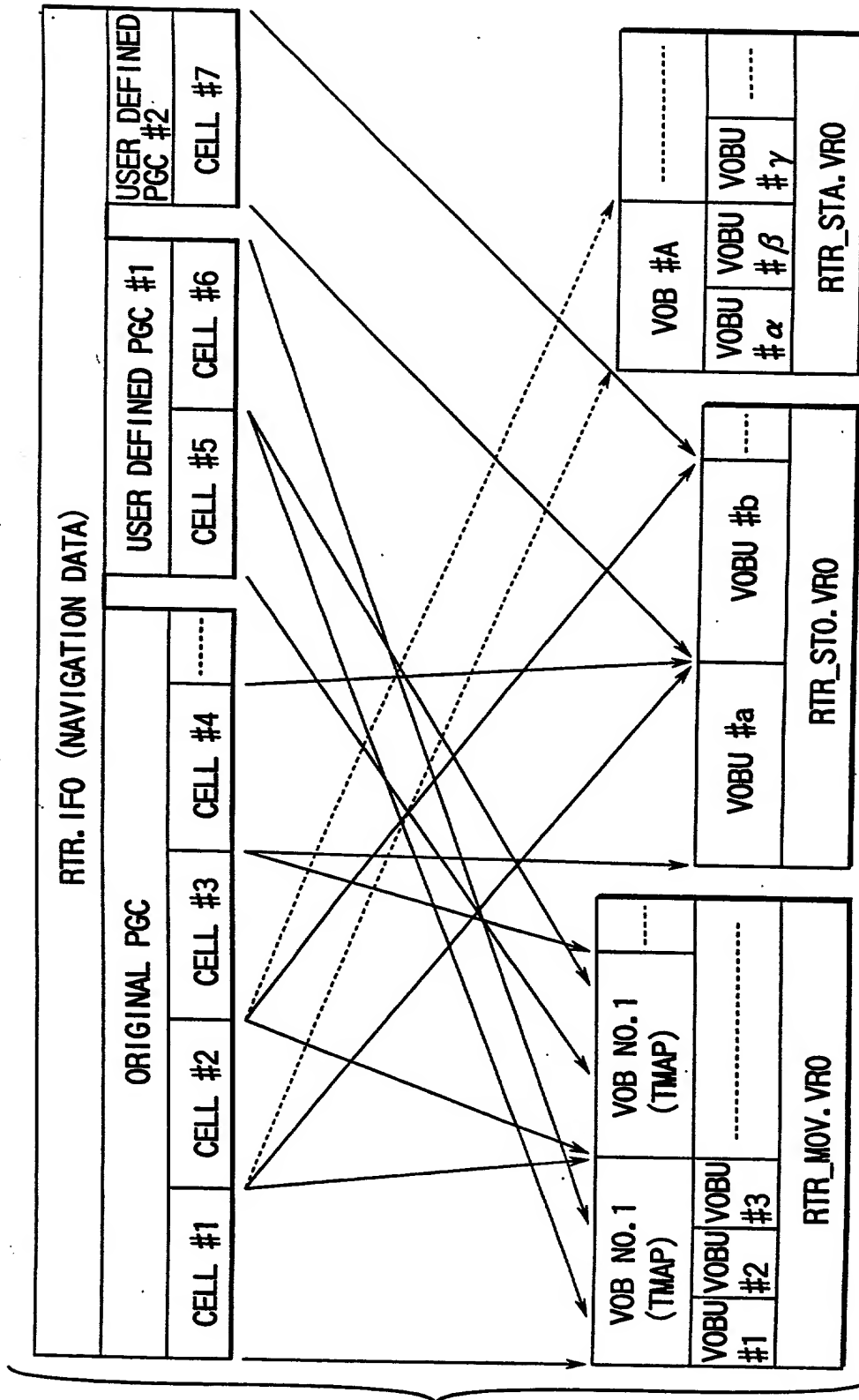


FIG. 25

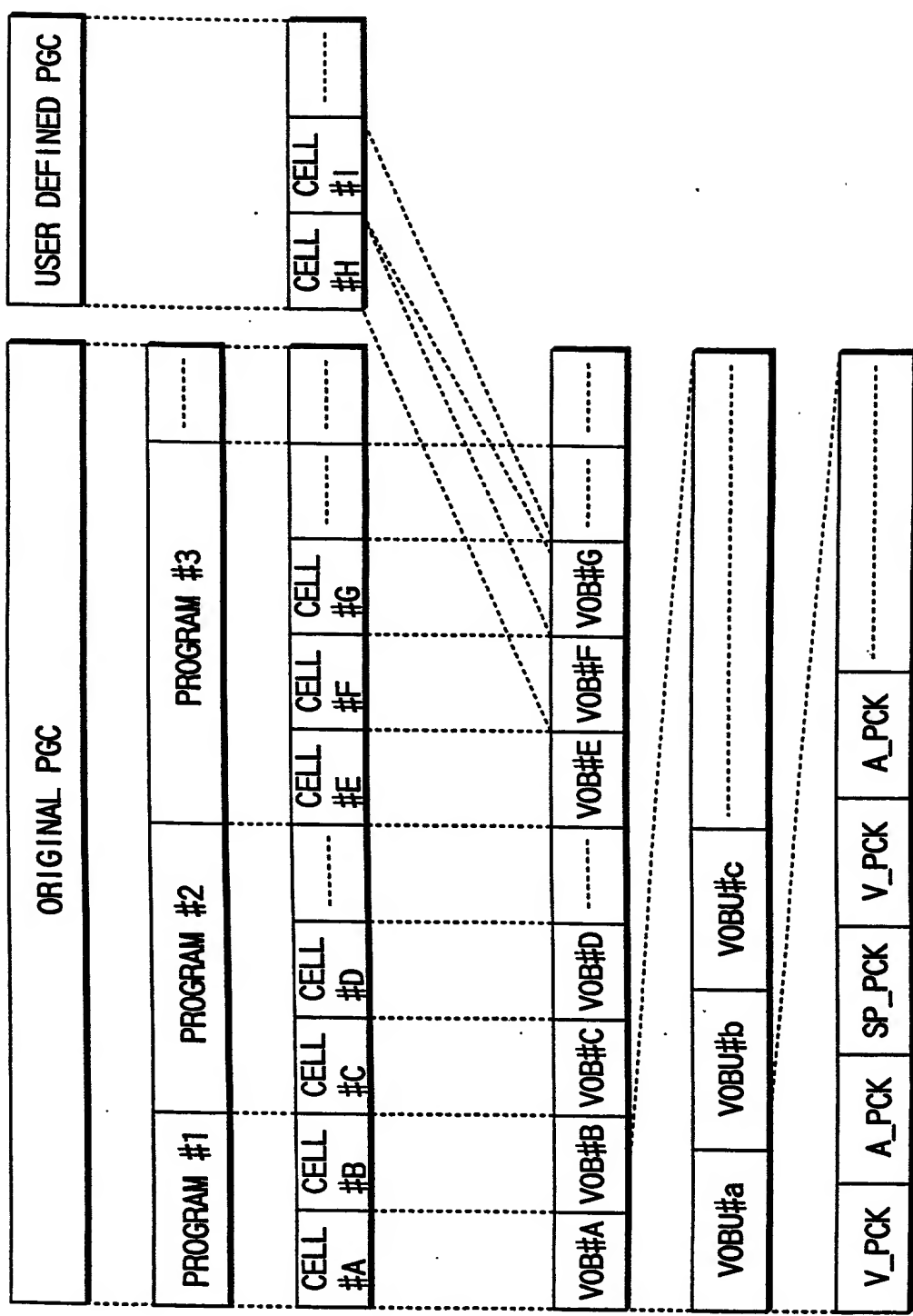


FIG. 26

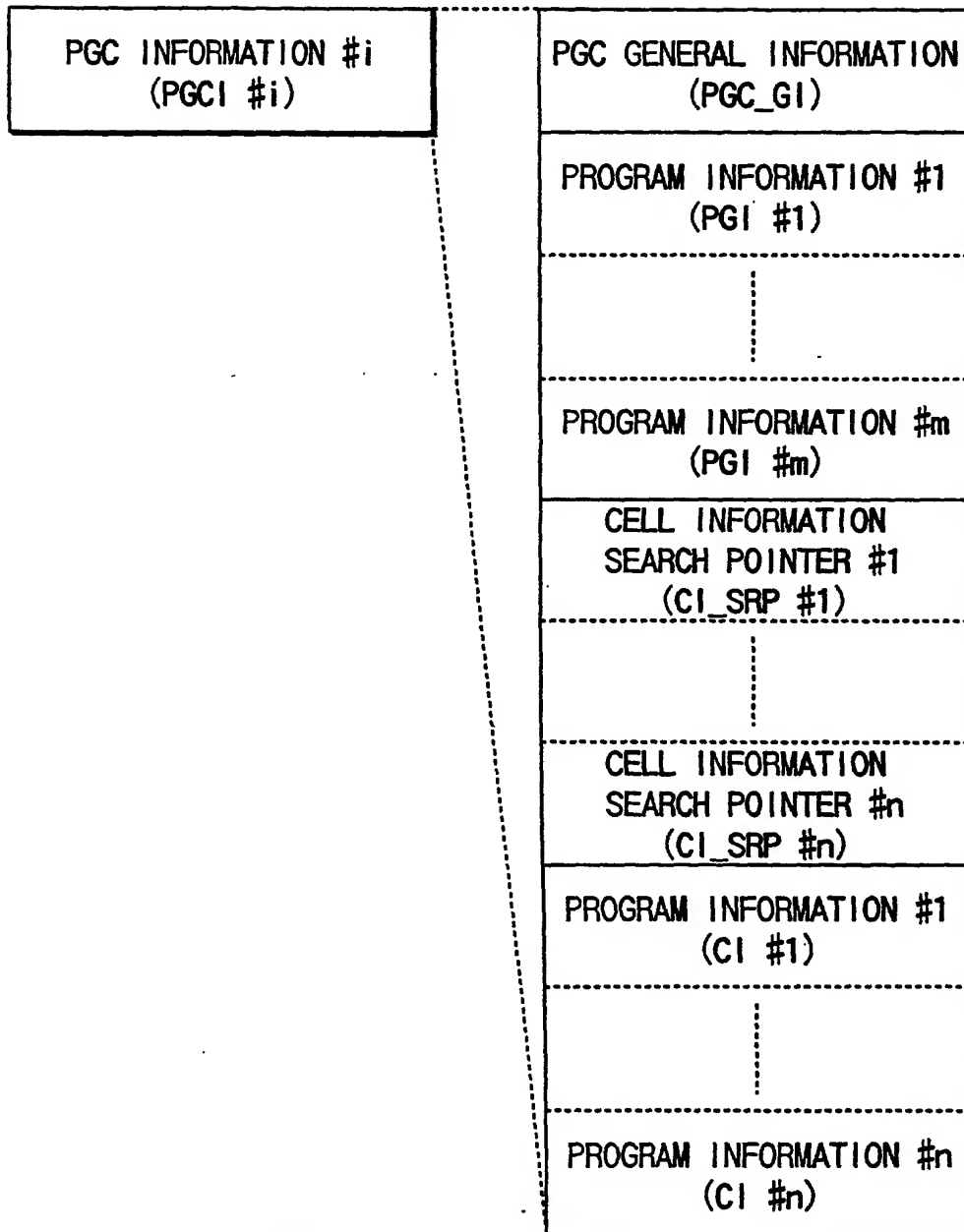


FIG. 27

PGC_GI

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	RESERVED	RESERVED	1 BYTE
1	PG_Ns	NUMBER OF PGCs	1 BYTE
2 TO 3	CI_SRP_Ns	NUMBER OF CI_SRP's	2 BYTES
TOTAL			4 BYTES

RBP:RELATIVE BYTE POSITION

FIG. 28

PGI.

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	RESERVED	RESERVED	1 BYTE
1	PG_TY	PROGRAM TYPE	1 BYTE
2 TO 3	C_Ns	NUMBER OF CELLS IN THIS PG	2 BYTES
4 TO 131	PRM_TXTI	PRIMARY TEXT INFORMATION	128 BYTES
132 TO 133	IT_TXT_SRPN	IT_TXT_SRP NUMBER	2 BYTES
134 TO 141	THM_PTRI	THUMBNAIL POINTER INFORMATION	8 BYTES
TOTAL			142 BYTES

RBP:RELATIVE BYTE POSITION

FIG. 29

PG_TY

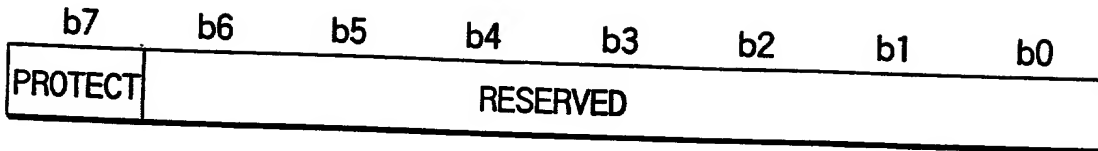


FIG. 30

THM_PTRI

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
134 TO 135	CN	CELL NUMBER	2 BYTES
136 TO 141	THM_PT	THUMBNAIL POINT	6 BYTES
TOTAL			8 BYTES

RBP:RELATIVE BYTE POSITION

FIG. 31

C_TY

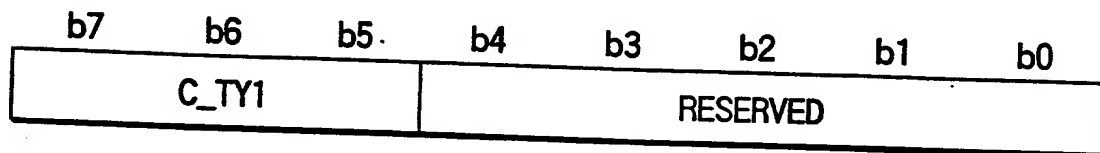


FIG. 37

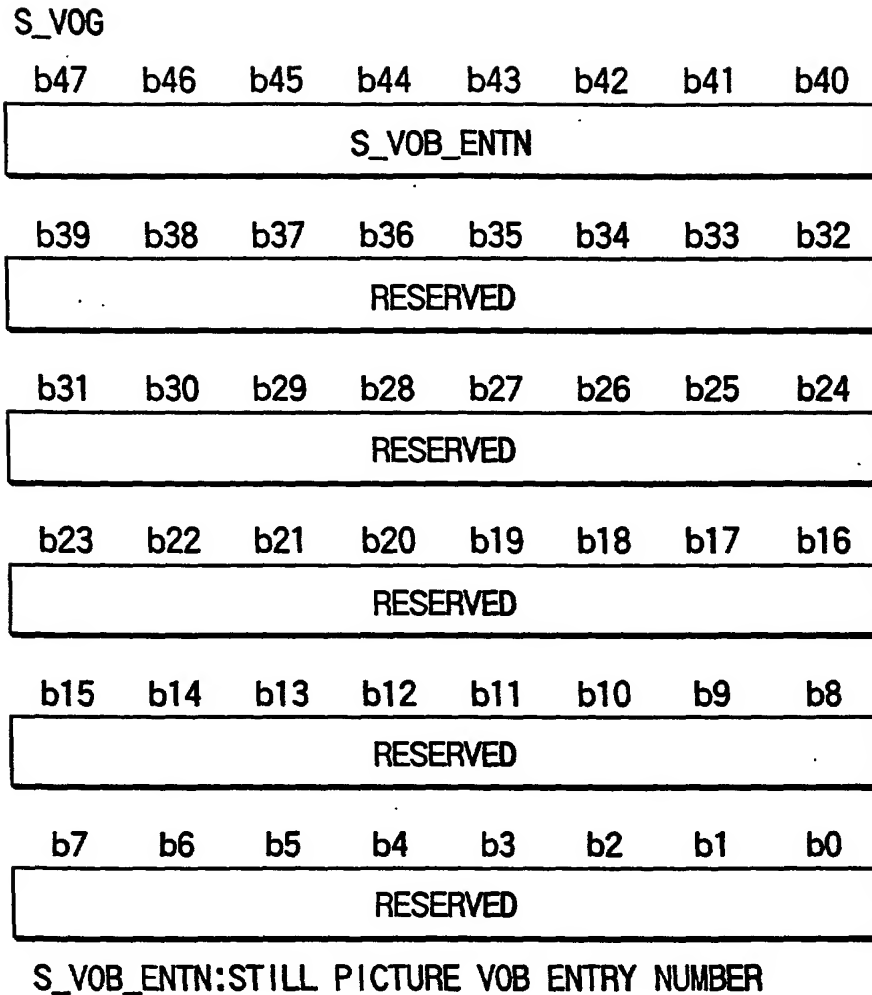


FIG. 32

CI_SRP		(DESCRIPTION ORDER)	
RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0 TO 3	CI_SA	START ADDRESS OF CI	4 BYTES
TOTAL			4 BYTES

RBP:RELATIVE BYTE POSITION

FIG. 33

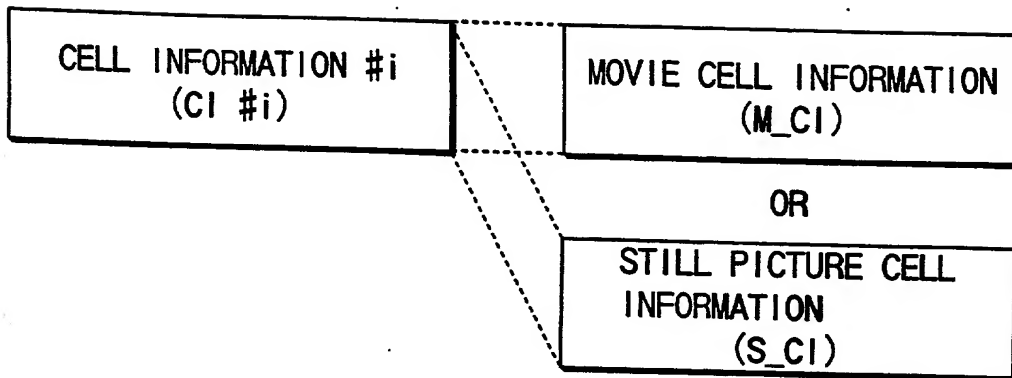


FIG. 34

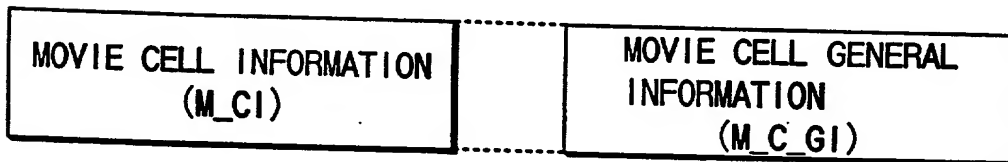


FIG. 35

M_C_GI

(DESCRIPTION ORDER)

RBP	FIELD NAME	CONTENTS	NUMBER OF BYTES
0	RESERVED	RESERVED	1 BYTE
1	C_TY	CELL TYPE	1 BYTE
2 TO 3	M_VOBI_SRPN	MOVIE VOBI SEARCH POINTER NUMBER	2 BYTES
4 TO 5	C_EPI_Ns	NUMBER OF CELL ENTRY POINT INFORMATION	2 BYTES
6 TO 11	C_V_S_PTM	START PTM OF THIS CELL	6 BYTES
12 TO 17	C_V_E_PTM	END PTM OF THIS CELL	6 BYTES
TOTAL			18 BYTES

RBP:RELATIVE BYTE POSITION

FIG. 36